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| 10/649,344 | 08/27/2003 | Ralph L. Schipani | 01450.0009-US-12 | 4158 |
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| ALTERA LAW GROUP, LLC | | | | |
| 6500 CITY WEST PARKWAY | | | | |
| SUITE 100 | | | | |
| MINNEAPOLIS, MN 55344-7704 | | | | |
| | | | SLACK, NAKO N | |
| | | | ART UNIT | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Response to Amendment

In view of Applicant's Amendment received January 24, 2005, the corrected drawing has been accepted. Amendments to claims 4, 11, 14, and 18 have been entered, and claims 1-3, 5-10, 12, 13, 15-17, 19 and 20 have been canceled as requested. New claims 21-36 have been entered.

Claims 4, 11, 14, 18, and 21-36 are pending in this application, and an examination of these claims is herein presented.

Specification

The disclosure is objected to because of the following informalities:

On page 15, line 10, "102" should be -- 104 --;

On page 17, line 10, "located" should be -- located at --.

Appropriate correction is required.

Claim Objections

Claim 4 is objected to because of the following informalities: In claim 4, line 9, "having comprise" appears to be in error. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 11, line 4, the phrase "the lower edges" lacks antecedent basis. Also in claim 11, lines 3-5, the phrase "the side members adjacently arranged so that the lower edges of the adjacently arranged members form a closed shape" does not make sense. How do two edges form a closed shape? Clarification is required.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 21-36 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Hinge members configured "to urge" the bridging members to a position corresponding to the deployed position of the truss member are critical or essential to the practice of the invention, but were not included in the claim(s) and not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The term "to urge" means to force or impel in an indicated direction (Webster's Dictionary). As best understood from Applicant's disclosure, the hinge members are not configured to urge them in a particular direction. The hinge members are configured to indicate a deployed state using portions of varying resistance. Specifically, Applicant states that the hinge is formed with less resistance at the center

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portion (312) to give the user feedback that the truss has reached the deployed configuration (page 16, lines 4-6 from the bottom). Therefore, it's the user who provides the force to urge the bridging member into position, while the hinge members are configured to indicate the deployed state. Correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 11 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by US Patent 6,149,021 to Beaulieu.

Claim 11:

Beaulieu discloses a folding truss member comprising a plurality of side members (16 and 18, Figure 4) with four sides and adjacent side edges, and a plurality of hinges (20, Figure 4) affixed to each of the adjacent side edges to allow relative rotation between side members and permitting a collapsed, flattened truss assembly (Figure 3).

Claim 18 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by US Patent 2,987,148 to Millard.

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Claim 18:

Millard discloses a method of operating a foldable truss member capable of moving from a substantially flat (Figure 2) to an open deployed position (Figure 1) comprising the steps of bridging a plurality of side members to form a boundary for each of the truss members, each of the side members including an elongated edge hingedly attached to an adjacent side member, the elongated edges of the side members defining a plurality of corners of the truss member; rotating the adjacent side members about the elongated edges to put the side members of the truss members in a deployed configuration; and creating a rotational resistance between the side members so that it is necessary to overcome a holding force, frictional force (column 2, lines 7-10) when the truss member is in a deployed position and is being moved toward a folded position, to generally maintain the truss in a deployed position.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21, 24, 26, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 2,987,148 to Millard.

Claim 21:

Millard discloses a foldable truss member moveable between a substantially folded and open deployed positions, comprising: a plurality of adjacently connected side members together forming a peripheral boundary of the truss member, each side member comprising: an elongated support member (10-13) having a side surface; a bridging member (18-25) hingedly connected to the side surface at an attachment point of the support member, a plurality of hinge members pivotally joining the bridging member to the support member and an adjacent side member, each hinge member allowing relative rotation of the side members,

Millard does not disclose that the hinge members are configured to urge said bridging members to a position corresponding to the deployed position of said truss member. However, this point was discussed in the 112 rejection above, that Applicant's hinge members are not intended "to urge" the bridging members to a position. Until clarification is made, Millard's hinge members satisfy the function of maintaining the bridging members in a position corresponding to a deployed position such that when the truss is deployed, it will tend to stay in the deployed state (due to friction, column 2, lines 7-10).

Claim 24:

Millard's hinge members comprise a block member (18-25) affixed to said support member having a channel (35) therethrough, said channel being sized to frictionally receive a movable bridging member (14-17). While Applicant states that Millard does not show a channel, the term "channel" can also be a conduit or tube

(Merriam-Webster Dictionary). If Applicant wishes to distinguish the channel from a tube or conduit, a more definite phrase such as 'U-shaped channel' is suggested.

Claim 26:

Millard's block member includes a channel for said bridging member and where said channel is radiused to provide rotational resistance between said channel and said bridging member (column 2, lines 7-10).

Claim 35:

Millard discloses a foldable truss member moveable between a substantially folded and open deployed positions, comprising: a plurality of adjacently connected side members together forming a peripheral boundary of the truss member, each side member comprising: an elongated support member having a side surface, a bridging member hingedly connected to the side surface at an attachment point of the support member, at least one hinge members pivotally joining the bridging member to the support member and an adjacent side member, and said hinge member allowing relative rotation of the side members.

Millard does not disclose that the hinge members are configured to urge said bridging members to a position corresponding to the deployed position of said truss member. However, this point was discussed in the 112 rejection above, that Applicant's hinge members are not intended "to urge" the bridging members to a position. Until clarification is made, Millard's hinge members satisfy the function of maintaining the bridging members in a position corresponding to a deployed position such that when the

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truss is deployed, it will tend to stay in the deployed state (due to friction, column 2, lines 7-10).

Claim 36:

Millard discloses a foldable truss member moveable between a substantially folded and open deployed positions, comprising: a plurality of adjacently connected side members together forming a peripheral boundary of the truss member, each side member comprising: an elongated support member having a side surface; a bridging member hingedly connected to the side surface at an attachment point of the support member, at least one first and second hinge members pivotally joining the bridging member to the support member and an adjacent side member, and said hinge member allowing relative rotation of the side members.

Millard does not disclose that the hinge members are configured to urge said bridging members to a position corresponding to the deployed position of said truss member. However, this point was discussed in the 112 rejection above, that Applicant's hinge members are not intended "to urge" the bridging members to a position. Until clarification is made, Millard's hinge members satisfy the function of maintaining the bridging members in a position corresponding to a deployed position such that when the truss is deployed, it will tend to stay in the deployed state (due to friction, column 2, lines 7-10).

Allowable Subject Matter

Claim 4 is objected to for the reasons stated in the Claim Objections above; otherwise, claim 4 would be allowable if corrected of these deficiencies.

Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

If corrected of the 112-Rejections stated above, Claims 22, 23, 25, 27-34 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Final

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naoko Slack whose current telephone number is (703) 305-0315. After 11 April 2005, the new telephone number will be (571) 272-6848. The examiner can normally be reached on Mon-Fri (6:00 am-2:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl D. Friedman can be reached on (703) 308-0839. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Naoko Slack
Primary Examiner
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